

WOMEN INVENTORS EQUAL MEN

IN USEFULNESS OF THEIR PRODUCT.

HERE is no question of the fact that the women are going in for mechanics. Their inventions prove it; and they are taking out a greater number of patents every year. When they first ventured with some timidity into the inventive field, they devoted their attention almost exclusively to things which had to do with their every-day environment, particularly dress and household matters. It is different nowadays.

More than 6,000 patents have been taken out by women up to the present date. They cover the widest imaginable field, and not a few of them are of great industrial value. Two represent inventions which are of the kind that mark steps in the upward progress of civilization.

One of these is the Coston light—a pyrotechnic contrivance for night signaling purposes, which is in use on board ships and by life-saving patrols all over the world. A Washington woman, after whom it was named, originated it. The other contrivance is the familiar ice cream freezer.

The ice cream freezer may not seem to be of great importance in our civilization, but how should we get along without it? Nothing else has ever been devised that would serve the purpose. The machine today is almost exactly the same as the original, which was patented as long ago as 1843 by Mrs. Nancy M. Johnson, the widow of a naval officer, residing in Philadelphia. Her model is preserved at the Patent Office among its most highly prized treasures. Mrs. Johnson sold her invention for \$1,500. If she had held on to it, she might have made \$1,000,000 out of it.

THE first woman to whom a patent was granted in this country was Mary Kies, of Connecticut—a State which has more inventors in proportion to population than any other in the Union. Her idea (dated 1809) was for weaving straw with silk thread. The gentler sex had not become creative at that time, and six years elapsed before the second patent was issued to one of its members, named Mary Brush, for an improvement in corsets.

Nearly all of the early patents granted to women were for improvements in articles of clothing or domestic usefulness, such as cooking utensils, picture frames, etc. But suddenly a Philadelphia woman started the ball rolling in a new direction by inventing a beehive. Another, from the same city, popped up with a railway car-heater. A California woman suggested a novelty in the way of a dumping wagon; a Georgia woman offered a plow, and an Ohio woman a car-coupler. A Philadelphia woman came forward with a life-raft, and a Pittsburgh woman with a car-wheel. Feminine ideas had begun to expand, and presently a Chicago woman took out a patent on a process for concentrating ores, and another from Buffalo produced a machine for manufacturing ozone.

Let it not be said that women do not have practical ideas, they have proved it by their inventions. Who was it who first hit upon the notion of syllabic types—types, that is to say, which represent syllables, for printing purposes, instead of letters? Inquire at the Patent Office, and you will find that it was a woman. Who originated the typewriter for the blind?—a machine which has proved a god-send to the afflicted. Woman. Who patented a slate for the blind, on which they could write without seeing? Again, a woman.

Of course, they have patented a great many trivial things, and some foolish ones. So likewise have the men. An examination of the files of the Patent Office will show that a great majority of all inventions are not of a practical character. It is the exceptional one that proves actually useful. Why, then, should anybody be surprised to find that a woman has applied for a patent on a method of making "artificial dimples"?—though it was not granted.

How to Make Dimples.

Here are the directions: "Smear a small spot on cheek or chin with

colorless shellac varnish mixed with glue. With the point of a pencil or pen-holder press the flesh, holding it until the substance on the face becomes dry and hard. The stiffened indentation thus retains the exact shape of a dimple, and a little face-powder dusted over it will conceal the varnish and glue compound. Some care must be observed not to smile too suddenly, or the dimple may be broken. But with ordinary usage it

will retain its shape a whole evening, if not longer." The inventor adds that her method is "not so available for 'thin or bony faces'."

ORIGINAL ICE-CREAM FREEZER Invented by NANCY M. JOHNSON, PHILADELPHIA.

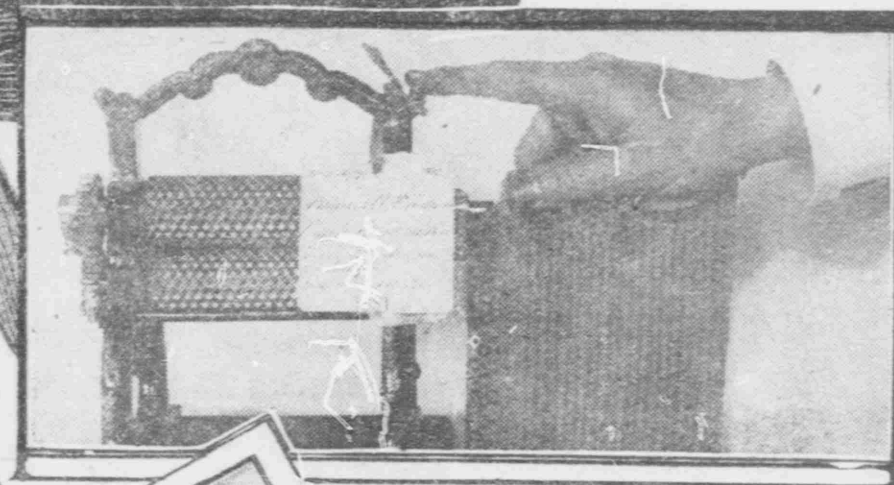
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One by Farmer's Daughter.

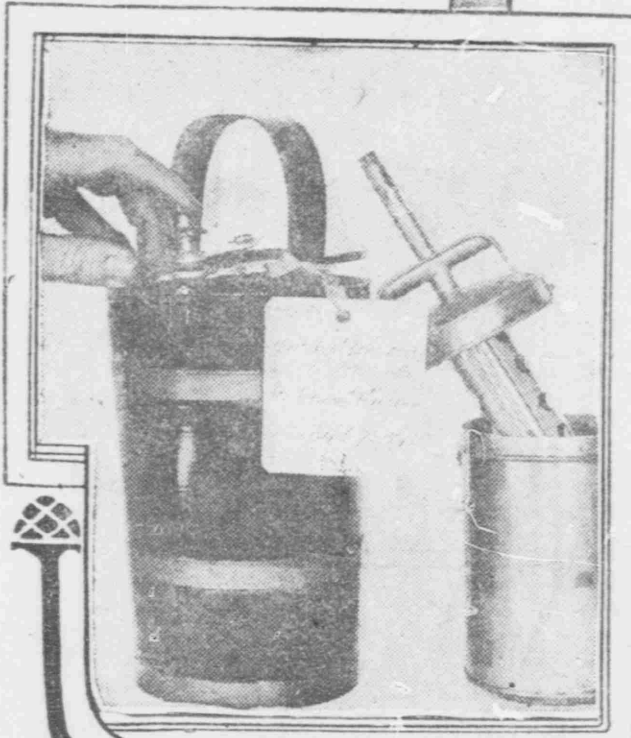
One of the most valuable of women's inventions up to date is a machine for making comb-foundations for beehives, patented by Frances A. Dunham. It saves the bees half the labor of comb-construction by turning out wax sheets which, suspended in the hives, serve as a basis to build the combs upon. But the most remarkable thing about it, perhaps, is that all the cells are made of "worker"



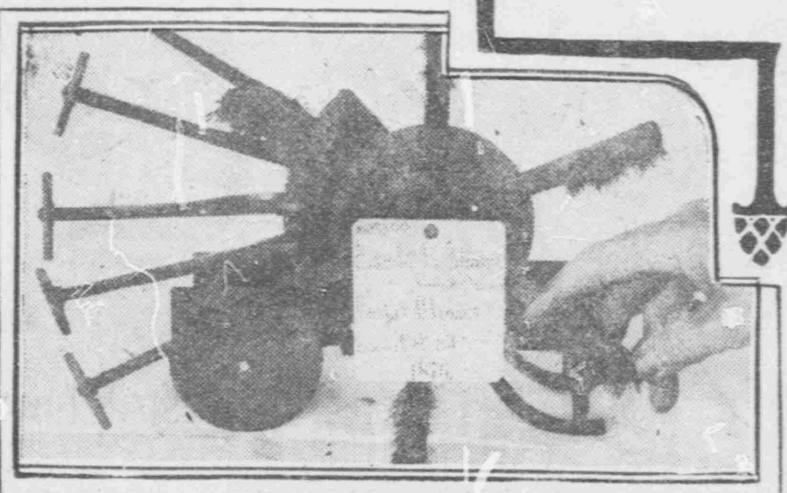
ROCKING CHAIR FOR BALD-HEADED MEN. Invented by MARY WOODWARD, PALMYRA, N. H.



MACHINE FOR MAKING COMB FOUNDATION FOR BEEHIVES. Invented by FRANCES A. DUNHAM.



LOCOMOTIVE WHICH DUMPS ITS CINDERS ON THE TRACK BEHIND. Invented by AUGUST B. RODGER, BROOKLYN.



CARPET CLEANER. Invented by SARAH STEARNS, DULUTH, MINN.

them masquerade as a window-cleaner; another is a spring-bed under ordinary circumstances. A thermometer that gives an alarm of fire when the temperature rises above a certain point is a woman's idea, and so likewise is a scheme for making the doors and shutters of a dwelling fireproof, so that they may not catch and impede escape, whatever happens to the rest of the house.

Things For Men.

It is noticeable that the inventions of women in a large percentage of instances have the comfort of men in view. For instance, it is a woman who has patent a device for lowering a latchkey from a window. This ought to be a great help to husbands kept out late at night at a lodge meeting or by the duty of sitting up with a sick friend. Other things in the same general line are a combined beer and water cooler, a lantern that can be turned into a dinner-pail, a perspiration-proof shirt, a pocket spittoon for tobacco-chewers, a moustache spoon, several styles of moustache guards, to keep the masculine ornament out of the soup or coffee, and "moustache trainers," to be worn at night.

A Chicago woman has invented a

scarf-jewel which is made to revolve by a clockwork mechanism inside of the necktie. For keeping "pants" in shape there are quite a number of contrivances devised by persons of gentler sex, and one more elaborate affair of the kind is described as a "garment stretcher that simulates the human form." Women, too, have patented several "improvements in cigars," one of which consists in making the "wreeds" of eucalyptus leaves instead of tobacco. Cigars of this kind, the inventor claims, leave a clean and pleasant taste in the mouth—so much nicer than the disgusting herb nicotine. And, if desired, they may be crumbled up and used for toothpowder.

Some of Their Inventions.

So many interesting things have been invented by women, however, that it is impossible to mention more than a few of them here. Among them are a self-heating radiator, an implement for holding green corn when one eats it, a refrigerator with revolving shelves (surely an excellent idea), a folding car-step to render access to railroad cars easier for the fat and elderly, an egg cup that fits an egg of any size, a deep-sea telescope for examining the ocean bottom for wrecks, a robber-proof chicken coop, a musical skipping rope, a trap for bedbugs, a pair of scissors and tape measure combined, a step-ladder that is an ironing board in disguise, a sofa that can be transformed into a bathtub, a machine for hanging wall paper, a rocking chair with automatic attachment for keeping the flies off the heads of a half-headed man, a means of detecting tampering with sealed envelopes, a combined collar and necktie, a door mat that is also a card receiver, and a carriage with one wheel.

Betsy Jane Martin, of Pomona, Kan., has invented a fire-proof asbestos suit of clothes, sewn with asbestos thread; and Augusta M. Dodgers, of Brooklyn, has patented a locomotive which dumps all of its cinders on the track behind.

MILLIONS OF STARS Surround the World

Let the reader try to imagine that in every smallest speck of protoplasm that goes to make up his being, and in every smallest particle of matter he knows of, there exists a universe like the terrestrial universe which modern science describes to us, with systems of suns, stars, and planets.

Let us also try to imagine that beyond the terrestrial universe there is another universe so much larger than the terrestrial universe as the terrestrial universe is larger than the infinitesimal universe hinted above. And beyond that other universe each just as much larger than the next below it.

What then? Then he will have some faint conception of the astounding theory of "worlds within worlds," which E. E. Fournier d'Abbe, an Irish scientist, advances in his remarkable book, "Two New Worlds," recently published in London.

The modern theory of atoms and electrons is, of course, that the electrons revolve around the atom exactly as the earth revolves around the sun. Mr. d'Abbe computes the astral computation must be omitted here) that the earth is 10,000 trillion times larger than the electron. But the relation of the earth to the sun is mathematically exactly that of the electron to the atom with which it is associated.

If, on the other hand, the terrestrial universe were enlarged 10,000 trillion times we should have—well, let the

reader imagine, if he can, after he has read some of Mr. d'Abbe's word pictures.

This infinitesimally small universe which Mr. d'Abbe has "discovered" he calls the infra-world, and the other, the infinitely large, the supra-world. Stated in another way, Mr. d'Abbe's discovery is that if the scale of magnitudes of space and time be reduced to the ten-thousand-million-million-millionth part, atoms become suns, electrons, planets, and the one-five-hundred-million-millionth of a second a year, the period of revolution of the electron around the sun; that, none the less, absolute velocity remains unchanged and things would happen in pretty much the same way, so that we should be quite unconscious of the change from one scale of being into the other.—Exchange.

THE LAST STRAW.

The young man and the girl were standing outside the front door, having a final chat after his evening call. He was leaning against the door post, talking in low tones. Presently the young lady looked around to discover her father in the doorway, clad in a dressing gown.

"Why, father, what in the world is the matter?" she inquired.

"Join," said the father, addressing himself to the young man, "you know I have never complained about your staying late, and I am not going to complain of that now, but for goodness sake stop leaning against the pushbutton and let the rest of the family get some sleep."

BORROWING Almost Always Costs Friends and So Does LENDING!

AMONG the daily and trivial customs which so frequently caused misunderstandings—affect friendships and even wreck affection, none is so common and so belittling as the habit of borrowing. It is doubly punishable, in so much as it is almost always unnecessary and no matter what the necessity may be, to do without, is generally more desirable than to incur feelings of obligation.

Business loans between friends are frequently peculiarly unfortunate, because the bitterness of possible complications is generally in proportion to the former love and it is decidedly the part of wisdom and economy to am-

play a trust and lean company rather than appeal to a friend, for in the former instance, there is no obligation, whereas in the latter, it can not be reckoned, for there is no known power or standard sufficiently subtle to equalize sentiment and the material; so it will be well for all to bear in mind that a forfeited friendship is a far dearer form of interest to pay than the highest commercial percentage.

The quotation, "The way to lose a friend is to lend him money," has all become a proverb and Thackeray speaks of the way in which a five-pound note will break up a half-century's attachment between two brethren.

The inexperienced will unreservedly state that there is some abnormal weakness in a friendship, so easily affected, but inexplicable as it may seem, the fact remains that sooner or later such tests prove disastrous.

Have we not all heard such remarks as "That family owes its success in life to my father's generosity?" and no matter how punctilious the said "family" may have been in their payments and notwithstanding what numerous evidences of gratitude may have been shown, there is almost always an indescribably latent feeling of

over beneficence on the part of one, while the other is ever conscious of a sense of debt, impossible to liquidate.

Like all things love and friendship have their limit and there is no surer means of undermining their faith than by taking unnecessary liberties and in proportion the depth and sacredness of love should be properly guarded and in all conditions of life private, domestic, and public it is well to remember:

"Neither a borrower nor a lender be. For loan oft loses both itself and friend. And borrowing dulls the edge of husbandry."—Shakespeare.

A Long-Felt Want.

One woman has filled a long-felt want by devising a window sash that will not stick. Another offers a trunk that may be transformed into a bed. Yet another has patented a trunk that can be folded up when empty. These are contrivances of obvious usefulness in flats, as are likewise a bureau that becomes a writing table, a traveling bag that turns into a bathtub, and a dressing table which, when pulled out from the wall, reveals a tub and all the other equipments of a bathroom.

Most women are very much afraid of fire, and thus it is not surprising to discover that they have patented a good many fire-escapes. Some of these take on queer disguises. One of